

Name : Charumathi P
Roll No: 3122 21 5001 020

UCS 2611 Internet Programming Lab
Exercise 3: OMG: Online Memory Game for Kids

Aim:

To design an interactive online memory game for the kids to play with.

Code:

index.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Memory Matching Game</title>
  <style>
    body {
      background-color: #BED1CF;
      display: flex;
      align-items: center;
      justify-content: center;
      height: 100vh;
      margin: 0;
    }
    #game-board {
      display: grid;
      grid-template-columns: repeat(4, 100px);
      gap: 10px;
    }
    .card {
      width: 100px;
      height: 100px;
      background-color: #21BF73;
      display: flex;
      align-items: center;
      justify-content: center;
      font-size: 50px;
      font-weight: 800;
      cursor: pointer;
    }
  </style>
</head>
<body>
  <div id="game-board">
    <div class="card">1</div>
    <div class="card">2</div>
    <div class="card">3</div>
    <div class="card">4</div>
    <div class="card">5</div>
    <div class="card">6</div>
    <div class="card">7</div>
    <div class="card">8</div>
    <div class="card">9</div>
    <div class="card">10</div>
    <div class="card">11</div>
    <div class="card">12</div>
    <div class="card">13</div>
    <div class="card">14</div>
    <div class="card">15</div>
    <div class="card">16</div>
  </div>
</body>
</html>
```

```

    }
    .hidden {
        background-color: #E78895;
        color: white;
    }
</style>
</head>
<body><br>
    <div style="background-color: #FFF7F1; border-radius: 10px; border:
5px #FFE4C9; padding: 1em">
        <center>
            <h1>Memory Game</h1>
        </center>
        <div id="game-board"></div>
    </div>
    <script>
        const symbols = ['A', 'B', 'C', 'D', 'E', 'F', 'G', 'H'];
        let gameBoard = document.getElementById('game-board');
        let cards = [];
        let clicks = 0;
        let matchedPairs = 0;
        let firstCard, secondCard;

        function createGameBoard() {
            let symbolsCopy = ['A', 'B', 'C', 'D', 'E', 'F', 'G', 'H', 'A',
'B', 'C', 'D', 'E', 'F', 'G', 'H'];
            symbolsCopy = shuffleArray(symbolsCopy);

            for (let symbol of symbolsCopy) {
                let card = document.createElement('div');
                card.classList.add('card');
                card.dataset.symbol = symbol;
                card.textContent = '?';
                card.addEventListener('click', flipCard);
                gameBoard.appendChild(card);
                cards.push(card);
            }
        }

        function shuffleArray(array) {
            for (let i = array.length - 1; i > 0; i--) {
                const j = Math.floor(Math.random() * (i + 1));
                [array[i], array[j]] = [array[j], array[i]];
            }
            return array;
        }
    </script>

```

```

function flipCard() {
  if (this === firstCard || this.classList.contains('hidden')) {
    return;
  }
  this.textContent = this.dataset.symbol;
  this.classList.add('hidden');

  if (!firstCard) {
    firstCard = this;
  } else {
    secondCard = this;
    setTimeout(() => {
      firstCard.textContent = firstCard.dataset.symbol;
      secondCard.textContent = secondCard.dataset.symbol;
    }, 5000);
    checkMatch();
  }
  clicks++;
  checkGameEnd();
}

function checkMatch() {
  if (firstCard.dataset.symbol === secondCard.dataset.symbol) {
    firstCard.removeEventListener('click', flipCard);
    secondCard.removeEventListener('click', flipCard);
    matchedPairs++;
    resetCards();
  } else {
    setTimeout(() => {
      firstCard.textContent = '?';
      secondCard.textContent = '?';
      firstCard.classList.remove('hidden');
      secondCard.classList.remove('hidden');
      resetCards();
    }, 1000);
  }
}

function resetCards() {
  firstCard = null;
  secondCard = null;
}

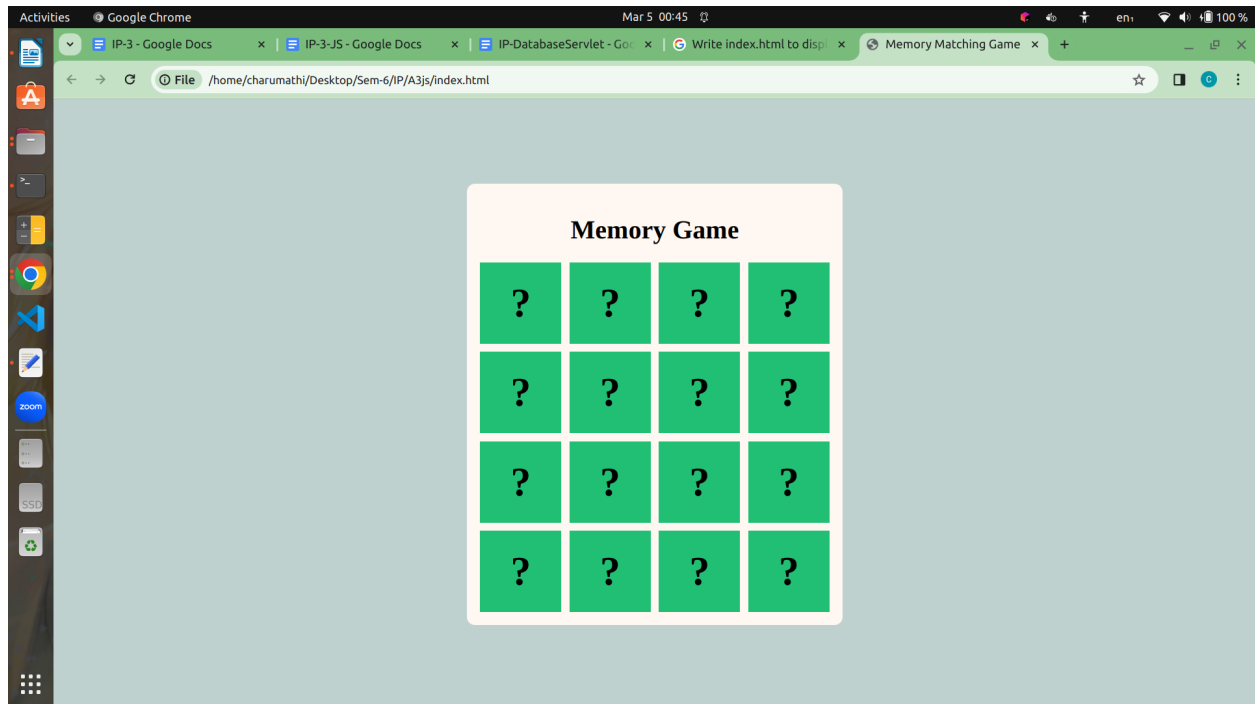
function checkGameEnd() {
  if (matchedPairs === symbols.length) {
    alert(`Congratulations! You won in ${clicks} clicks.`);
    resetGame();
  }
}

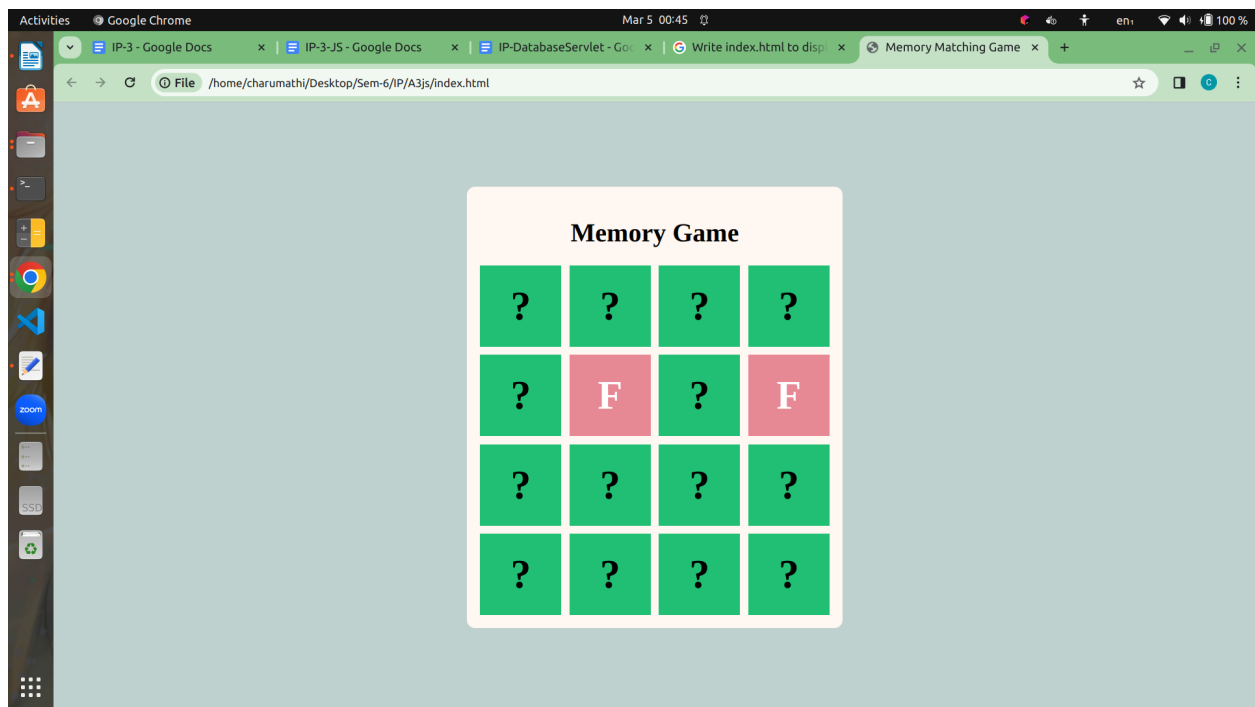
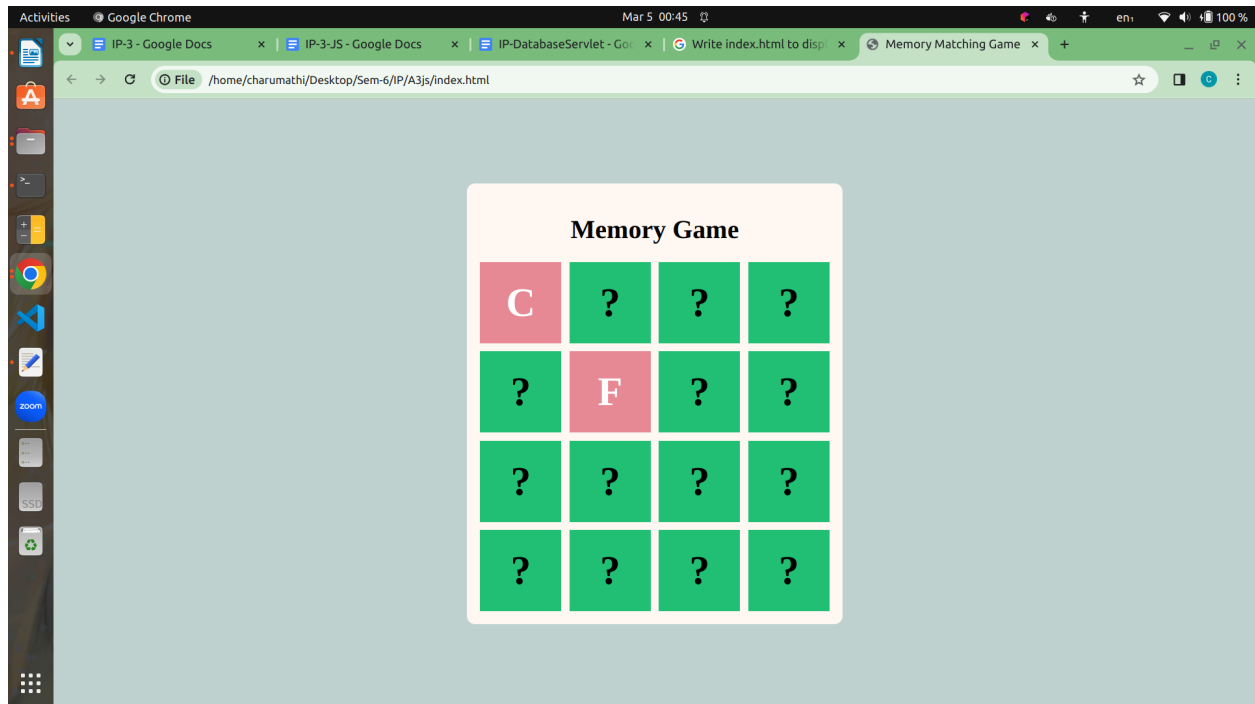
function resetGame() {

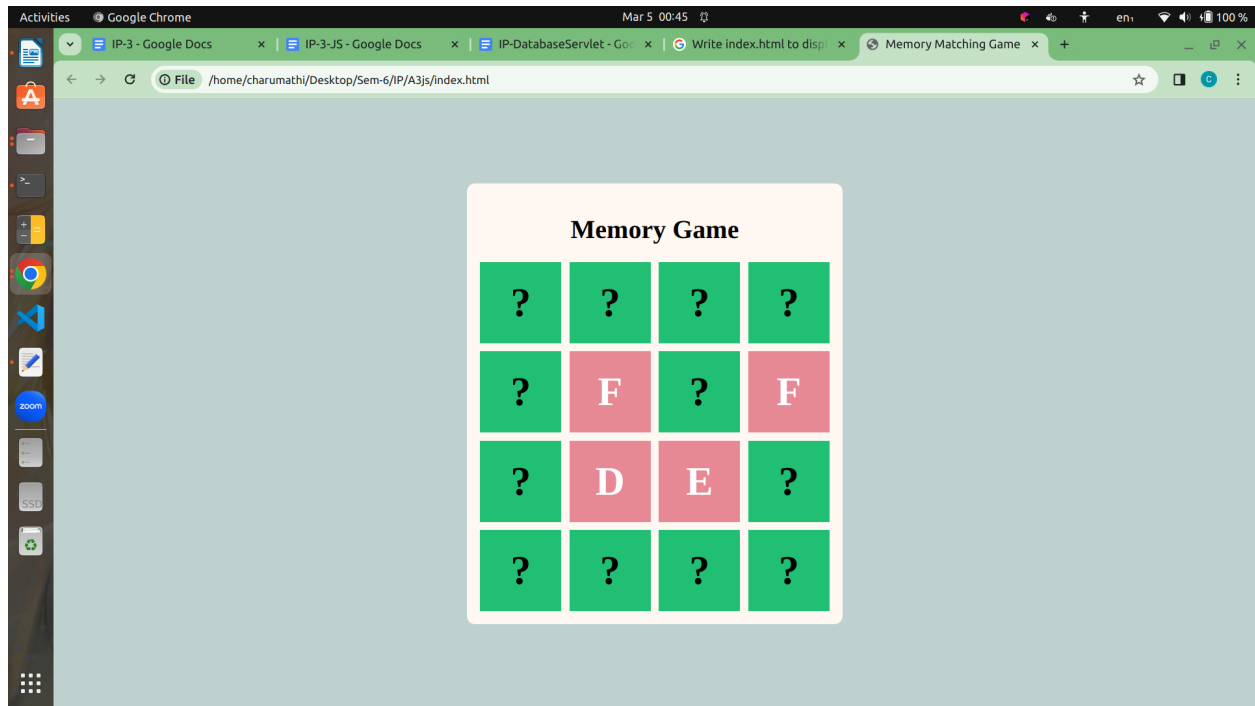
```

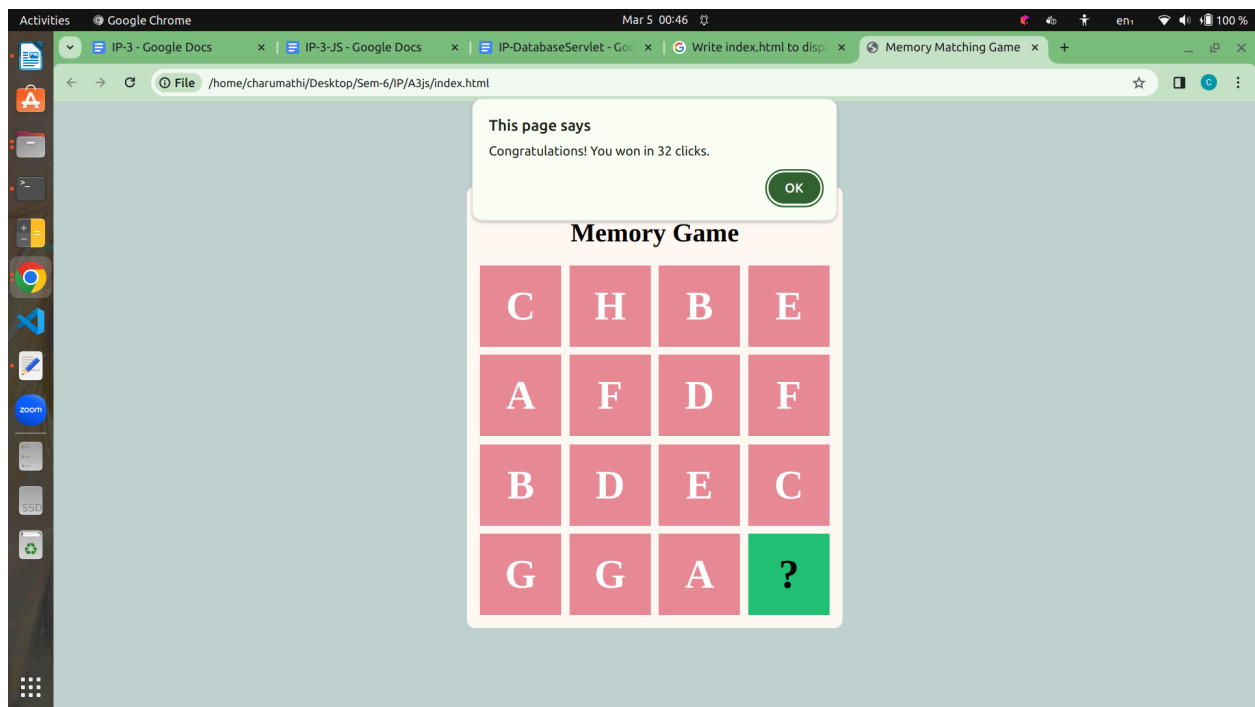
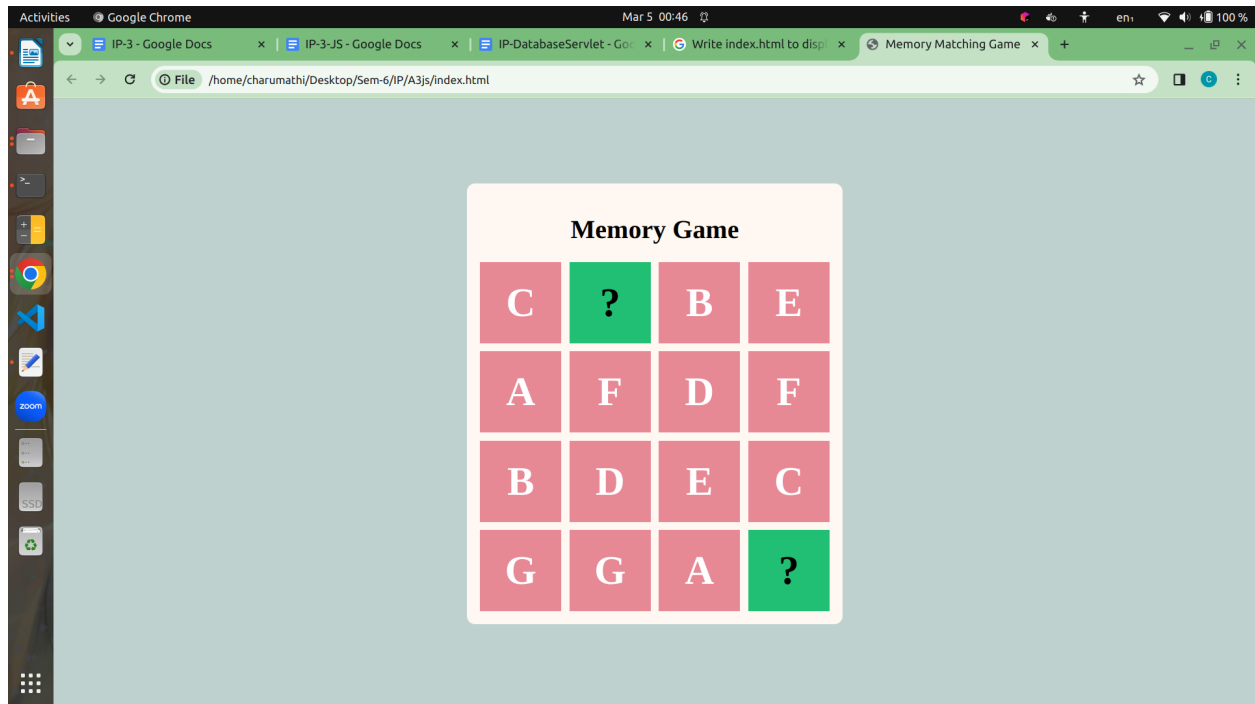
```
        gameBoard.innerHTML = '';
        cards = [];
        clicks = 0;
        matchedPairs = 0;
        createGameBoard();
    }
    createGameBoard();
</script>
</body>
</html>
```

Output:









Learning Outcome:

- Learned to alter the font, color, size, and spacing of the content using CSS.
- Learned how to create a game using JavaScript.